CLAIMS

What is claimed is:

1. A wireless network system, comprising

5   a plurality of access elements for wireless communication with at least one remote client element and for communication with a central control element;

a central control element for supervising said access elements, wherein the central control element is operative to manage and control the wireless connections between the access elements and corresponding remote client elements,

10   wherein the central control element is further operative to

detect a session initiation message associated with a remote client element, the session initiation message corresponding to a session between the remote client element and an end system,

process the session initiation messages to determine a Quality-of-

15 Service (QoS) policy,

associate the QoS policy to the session corresponding to the session initiation message, and

forward the session initiation message;

transmit the QoS policy to a first access element to which the remote

20 client element is associated, and

wherein the plurality of access elements are each operative to enforce the QoS policy on data flows associated with the session.

2. The system of claim 1 further comprising a computer network, wherein the

25 central control element is coupled to the computer network, and wherein the central control element is operative to

establish a tunnel with each access element for transmission of wireless traffic associated with corresponding remote client elements, and

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bridge network traffic between the computer network and a remote client element through a tunnel with a corresponding access element.

3. The system of claim 2 wherein the access elements are each connected to the central control element via a direct access line.

4. The system of claim 2 wherein the access elements are each operably coupled to the computer network.

5. The system of claim 1 wherein the central control element, in response to the handoff of the remote client element from the first access element to a second access element, is further operative to transmit the QoS policy to the second access element.

6. The system of claim 1 wherein the central control element is further operative to revoke previously granted QoS guarantees provided to at least one lower priority session, if enforcement of the QoS policy with all previously configured QoS policies exceeds a limit.

7. The system of claim 6 wherein the limit is the maximum bandwidth associated with the access element.

8. The system of claim 6 wherein the limit is a configurable maximum bandwidth limit.

9. The system of claim 6 wherein the limit is a maximum number of sessions.

10. The system of claim 1 further comprising a SIP server including an application layer authentication mechanism;

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and wherein the central control element is operative to

        maintain security states for remote client elements detected by the access elements,

        apply, at the access elements, a security mechanism to control access to the wireless connections to remote client elements, wherein operation of the security mechanism is based on the security states of the remote client elements, and

        adjust the security state associated with a remote client element based on its interaction with the authentication mechanism associated with the SIP server.

11. The system of claim 10 wherein the central control element is operative to deny connections with an access element to a wireless client element that fails to properly authenticate with the authentication mechanism of the SIP server.

12. A method for dynamically configuring a QoS mechanism for wireless sessions, comprising

        receiving, at a wireless network access device, a session initiation message associated with a wireless client, the session initiation message corresponding to a session between the wireless client and an end system;

        transparently processing the session initiation message to determine a Quality-of-Service (QoS) policy,

        associating the QoS policy to the session corresponding to the session initiation message, and

        forwarding the session initiation message; and

        enforcing the QoS policy on data flows associated with the session.

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